

**Notice and Necessary Information**  
To be Completed by Preparers of Class B Biosolids

Facility Name: City of Watsonville Wastewater Treatment Plant Monitoring Period 06 / 01 / 16 to 07/31 / 16

1. Pollutant and Nitrogen concentrations (report results on 100% dry weight basis. Attach lab analyses).

	As	Cd	Cu	Pb	Hg	Mo	Ni	Se	Zn	Org-N	NH <sub>4</sub> -N	% solids
Result	ND	2.1	430	12	1.2	11	28	14	800	47000	10000	15.7
Table 3	41	39	1500	300	17	na	420	100	2800	na	na	na
Table 1	75	85	4300	840	57	75	420	100	7500	na	na	na

Sampling date(s): 6/21/16, 6/27/16

2. Class B Pathogen Reduction: (Check off and fill in applicable portion)

- ☐ anaerobic digestion for \_\_\_\_\_ to \_\_\_\_\_ days at \_\_\_\_\_ to \_\_\_\_\_ degrees F / C (range for past month)  
Class B: time (days)  $\geq 120 - 3(\text{temp, degrees C})$  for times between 15 and 60 days
- ☐ aerobic digestion for \_\_\_\_\_ to \_\_\_\_\_ days at \_\_\_\_\_ to \_\_\_\_\_ degrees F / C (range for past month)  
Class B: time (days)  $\geq 120 - 4(\text{temp, degrees C})$  for times between 40 and 60 days
- ☐ drying beds for \_\_\_\_\_ to \_\_\_\_\_ months (attach records of dates in and out)  
Class B: time  $> 3$  months; 2 months  $> 0$  degrees C
- ☒ fecal coliform: geometric mean of seven samples = 12572 (attach lab results)  
Class B: geometric mean of seven samples is  $< 2,000,000$  mpn
- ☐ lime stabilization: pH at 2 hours after addition = \_\_\_\_\_  
Class B: pH 2 hours after addition of lime is  $\geq 12$

3. Vector Attraction Reduction:

- ☒ Option 1: % VS<sub>in</sub> = 75.7 % VS<sub>out</sub> = 57.5 % VSR = 56.4%  
VAR: VSR  $> 38\%$
- ☐ Option 2/3: Bench scale test: % VSR = \_\_\_\_\_ after \_\_\_\_\_ days  
VAR: additional VSR  $< 17\%$  after 40 days (anaerobic),  $< 15\%$  after 30 days (aerobic)
- ☐ Option 4: SOUR = \_\_\_\_\_  
VAR: SOUR  $< 1.5$  mg O<sub>2</sub>/hr/gram (dry weight)
- ☐ Option 5: Composted \_\_\_\_\_ days at temps of \_\_\_\_\_ to \_\_\_\_\_ degrees F/C (attach times/temps)  
VAR: temp  $> 40$  degrees C for 14 days, w/5 days  $> 45$  degrees C
- ☐ Option 6: time alkali added: \_\_\_\_\_ pH after 2 hours = \_\_\_\_\_ pH after 22 hours = \_\_\_\_\_  
VAR: pH  $\geq 12$  for 2 hours after alkali addition,  $\geq 11.5$  for additional 22 hrs
- ☐ Option 7: % solids = \_\_\_\_\_ Stabilization method: \_\_\_\_\_  
VAR: stabilized solids  $> 75\%$
- ☐ Option 8: % solids = \_\_\_\_\_  
VAR: unstabilized solids  $> 90\%$
- ☐ Option 9/10: Applier will inject/incorporate within \_\_\_\_\_ hours  
VAR: injection within 1 hour, incorporation within 6 hours

Certification: I certify, under penalty of law, that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system or the persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Name and Official Title: Barbara Pierson, Laboratory Manager

Phone: (831) 768-3179 E-mail: barbara.pierson@cityofwatsonville.org

Signature:  Date: 8/19/16

**Laboratories, Inc.**

Environmental Testing Laboratory Since 1949

City of Watsonville  
500 Clearwater Lane  
Watsonville, CA 95077Reported: 07/13/2016 16:20  
Project: Bi-Monthly Biosolids  
Project Number: Bi-Monthly Nutrients & Metals  
Project Manager: Barbara Pierson**Total Concentrations (TTLC)**

BCL Sample ID:	1617447-01	Client Sample Name: WWTP Biosolids, 6/21/2016 1:45:00PM, M. Sanchez							
Constituent	Dry Basis Result	As Recvd Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Arsenic	ND	ND	mg/kg	1.0	0.40	EPA-6010B	ND		1
Cadmium	2.1	0.32	mg/kg	0.50	0.052	EPA-6010B	ND	J	1
Chromium	82	13	mg/kg	0.50	0.050	EPA-6010B	0.26		1
Copper	430	67	mg/kg	1.0	0.050	EPA-6010B	0.18		1
Lead	12	2.0	mg/kg	2.5	0.28	EPA-6010B	ND	J	1
Mercury	1.2	0.19	mg/kg	0.16	0.041	EPA-7471A	ND		2
Molybdenum	11	1.7	mg/kg	2.5	0.050	EPA-6010B	ND	J	1
Nickel	28	4.3	mg/kg	0.50	0.15	EPA-6010B	0.24		1
Selenium	14	2.2	mg/kg	1.0	0.98	EPA-6010B	ND		1
Silver	2.2	0.34	mg/kg	0.50	0.067	EPA-6010B	ND	J	1
Zinc	800	130	mg/kg	2.5	0.087	EPA-6010B	0.44		1
Boron	25	3.9	mg/kg	5.0	0.50	EPA-6010B	ND	J	1
Sodium	1500	230	mg/kg	25	3.6	EPA-6010B	11		1
Potassium	1300	210	mg/kg	50	5.0	EPA-6010B	7.5		1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-6010B	07/11/16	07/12/16 10:51	JCC	PE-OP3	0.917	BZG0720
2	EPA-7471A	06/29/16	06/30/16 14:11	MEV	CETAC2	1.008	BZF2469

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.  
All results listed in this report are for the exclusive use of the submitting party. BC Laboratories, Inc. assumes no responsibility for report alteration, separation, detachment or third party interpretation.  
4100 Atlas Court Bakersfield, CA 93308 (661) 327-4911 FAX (661) 327-1918 www.bclabs.com

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**DENALI\_004758**



**Laboratories, Inc.**

Environmental Testing Laboratory Since 1949

City of Watsonville  
500 Clearwater Lane  
Watsonville, CA 95077

Reported: 07/13/2016 16:20  
Project: Bi-Monthly Biosolids  
Project Number: Bi-Monthly Nutrients & Metals  
Project Manager: Barbara Pierson

## Chemical Analysis

BCL Sample ID:	1617447-01	Client Sample Name: WWTP Biosolids, 6/21/2016 1:45:00PM, M. Sanchez							
Constituent	Dry Basis Result	As Recvd Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
pH	7.51	7.51	pH Units	0.05	0.05	EPA-9040		pH1:3	1
pH Measurement Temperature	23.0	23.0	C	0.1	0.1	EPA-9040			1
Nitrate as N	5.5	0.86	mg/kg	1.0	0.26	EPA-300.0	ND	J	2
Total Kjeldahl Nitrogen	57000	9000	mg/kg	400	150	EPA-351.2	ND	A07	3
Ammonia as N	10000	1600	mg/kg	200	100	EPA-350.1	ND	A07	4
Total Phosphorus	34000	5400	mg/kg	200	74	EPA-365.4	ND	A07	5
Solids	100	15.7	%	0.05	0.05	SM-2540G			6

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-9040	07/05/16	07/05/16 12:30	RML	B360	1	BZG0191
2	EPA-300.0	07/08/16	07/09/16 15:17	EMW	IC1	1	BZG0481
3	EPA-351.2	06/27/16	07/05/16 13:57	JMH	SC-1	10	BZF2280
4	EPA-350.1	07/01/16	07/08/16 10:35	JMH	SC-1	19.231	BZG0038
5	EPA-365.4	06/27/16	07/05/16 11:18	JMH	SC-1	20	BZF2281
6	SM-2540G	06/27/16	06/27/16 08:00	NW1	MANUAL	1	BZF2266

$$\text{org-N} = \text{TKN} - \text{ammonia}$$

$$57000 - 10,000 = 47,000$$



**Notice and Necessary Information**  
To be Completed by Preparers of Class B Biosolids

Facility Name: City of Watsonville Wastewater Treatment Plant Monitoring Period 04 / 01 / 16 to 05 / 31 / 16

1. Pollutant and Nitrogen concentrations (report results on 100% dry weight basis. Attach lab analyses).

	As	Cd	Cu	Pb	Hg	Mo	Ni	Se	Zn	Org-N	NH <sub>4</sub> -N	% solids
Result	2.7	2.2	500	18	1.9	9.9	28	11	970	44900	8100	17.5
Table 3	41	39	1500	300	17	na	420	100	2800	na	na	na
Table 1	75	85	4300	840	57	75	420	100	7500	na	na	na

Sampling date(s): 4/19/16, 4/25/16

2. Class B Pathogen Reduction: (Check off and fill in applicable portion)

- ☐ anaerobic digestion for \_\_\_\_\_ to \_\_\_\_\_ days at \_\_\_\_\_ to \_\_\_\_\_ degrees F / C (range for past month)  
Class B: time (days)  $\geq 120 - 3(\text{temp, degrees C})$  for times between 15 and 60 days
- ☐ aerobic digestion for \_\_\_\_\_ to \_\_\_\_\_ days at \_\_\_\_\_ to \_\_\_\_\_ degrees F / C (range for past month)  
Class B: time (days)  $\geq 120 - 4(\text{temp, degrees C})$  for times between 40 and 60 days
- ☐ drying beds for \_\_\_\_\_ to \_\_\_\_\_ months (attach records of dates in and out)  
Class B: time  $> 3$  months; 2 months  $> 0$  degrees C
- ☒ fecal coliform: geometric mean of seven samples = 4293 (attach lab results)  
Class B: geometric mean of seven samples is  $< 2,000,000$  mpn
- ☐ lime stabilization: pH at 2 hours after addition = \_\_\_\_\_  
Class B: pH 2 hours after addition of lime is  $\geq 12$


3. Vector Attraction Reduction:

- ☒ Option 1: % VS<sub>in</sub> = 79.5 % VS<sub>out</sub> = 60.5 % VSR = 60.5%  
VAR: VSR  $> 38\%$
- ☐ Option 2/3: Bench scale test: % VSR = \_\_\_\_\_ after \_\_\_\_\_ days  
VAR: additional VSR  $< 17\%$  after 40 days (anaerobic),  $< 15\%$  after 30 days (aerobic)
- ☐ Option 4: SOUR = \_\_\_\_\_  
VAR: SOUR  $< 1.5$  mg O<sub>2</sub>/hr/gram (dry weight)
- ☐ Option 5: Composted \_\_\_\_\_ days at temps of \_\_\_\_\_ to \_\_\_\_\_ degrees F/C (attach times/temps)  
VAR: temp  $> 40$  degrees C for 14 days, w/5 days  $> 45$  degrees C
- ☐ Option 6: time alkali added: \_\_\_\_\_ pH after 2 hours = \_\_\_\_\_ pH after 22 hours = \_\_\_\_\_  
VAR: pH  $\geq 12$  for 2 hours after alkali addition,  $\geq 11.5$  for additional 22 hrs
- ☐ Option 7: % solids = \_\_\_\_\_ Stabilization method: \_\_\_\_\_  
VAR: stabilized solids  $> 75\%$
- ☐ Option 8: % solids = \_\_\_\_\_  
VAR: unstabilized solids  $> 90\%$
- ☐ Option 9/10: Applier will inject/incorporate within \_\_\_\_\_ hours  
VAR: injection within 1 hour, incorporation within 6 hours

Certification: I certify, under penalty of law, that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system or the persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Name and Official Title: Barbara Pierson, Laboratory Manager

Phone: (831) 768-3179 E-mail: barbara.pierson@cityofwatsonville.org

Signature:  Date: 8/19/16

**Laboratories, Inc.**

Environmental Testing Laboratory Since 1949

City of Watsonville  
500 Clearwater Lane  
Watsonville, CA 95077Reported: 05/06/2016 16:53  
Project: Bi-Monthly Biosolids  
Project Number: Bi-Monthly Nutrients & Metals  
Project Manager: Barbara Pierson**Chemical Analysis**

BCL Sample ID:	1611451-01	Client Sample Name: WWTP Biosolids, 4/19/2016 10:50:00AM							
Constituent	Dry Basis Result	As Recvd Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
pH	7.88	7.88	pH Units	0.05	0.05	EPA-9040		pH1:3	1
pH Measurement Temperature	25.1	25.1	C	0.1	0.1	EPA-9040			1
Nitrate as N	9.4	1.6	mg/kg	1.0	0.26	EPA-300.0	ND		2
Nitrite as N	2.9	0.51	mg/kg	0.50	0.10	EPA-353.2	ND		3
Total Kjeldahl Nitrogen	53000	9300	mg/kg	400	150	EPA-351.2	ND	A07	4
Ammonia as N	8100	1400	mg/kg	200	100	EPA-350.1	ND	A07	5
Total Phosphorus	29000	5200	mg/kg	200	74	EPA-365.4	ND	A07	6
Solids	100	17.5	%	0.05	0.05	SM-2540G			7

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-9040	04/27/16	04/27/16 13:45	DIW	PH10	1	BZD2427
2	EPA-300.0	04/25/16	04/25/16 20:16	JSW	IC2	1	BZD2208
3	EPA-353.2	04/25/16	04/26/16 08:49	JMH	KONE-1	1	BZD2209
4	EPA-351.2	04/29/16	05/02/16 11:56	JMH	SC-1	10	BZD2702
5	EPA-350.1	04/26/16	04/26/16 16:55	JMH	SC-1	18.519	BZD2287
6	EPA-365.4	04/29/16	05/02/16 08:24	JMH	SC-1	20	BZD2703
7	SM-2540G	04/22/16	04/22/16 12:30	NW1	MANUAL	1	BZD2042

Org-N = TKN - ammonia

53,000 - 8100 = 44,900

DENALI\_004761

City of Watsonville  
500 Clearwater Lane  
Watsonville, CA 95077

Reported: 05/06/2016 16:53  
Project: Bi-Monthly Biosolids  
Project Number: Bi-Monthly Nutrients & Metals  
Project Manager: Barbara Pierson

### Total Concentrations (TTLIC)

BCL Sample ID:	1611451-01		Client Sample Name: WWTP Biosolids; 4/19/2016 10:50:00AM						
Constituent	Dry Basis Result	As Recvd Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Arsenic	ND	ND	mg/kg	1.0	0.40	EPA-6010B	ND		1
Cadmium	2.6	0.45	mg/kg	0.50	0.052	EPA-6010B	ND	J	1
Chromium	95	17	mg/kg	0.50	0.050	EPA-6010B	ND		1
Copper	480	85	mg/kg	1.0	0.050	EPA-6010B	ND		1
Lead	19	3.4	mg/kg	2.5	0.28	EPA-6010B	ND		1
Mercury	1.8	0.31	mg/kg	0.16	0.041	EPA-7471A	ND		2
Molybdenum	10	1.7	mg/kg	2.5	0.050	EPA-6010B	ND	J	1
Nickel	32	5.7	mg/kg	0.50	0.15	EPA-6010B	ND		1
Selenium	11	1.8	mg/kg	1.0	0.98	EPA-6010B	ND		1
Silver	2.5	0.43	mg/kg	0.50	0.067	EPA-6010B	ND	J	1
Zinc	990	170	mg/kg	2.5	0.087	EPA-6010B	0.63		1
Boron	29	5.1	mg/kg	5.0	0.50	EPA-6010B	ND		1
Sodium	1300	220	mg/kg	25	3.6	EPA-6010B	4.1		1
Potassium	1600	280	mg/kg	50	5.0	EPA-6010B	ND		1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-6010B	04/26/16	04/27/16 11:06	JCC	PE-OP3	0.926	BZD2046
2	EPA-7471A	04/27/16	04/28/16 10:47	MEV	CETAC2	1.025	BZD2385



**Notice and Necessary Information**  
To be Completed by Preparers of Class B Biosolids

Facility Name: City of Watsonville Wastewater Treatment Plant Monitoring Period 02 / 01 / 16 to 03 / 31 / 16

1. Pollutant and Nitrogen concentrations (report results on 100% dry weight basis. Attach lab analyses).

	As	Cd	Cu	Pb	Hg	Mo	Ni	Se	Zn	Org-N	NH <sub>4</sub> -N	% solids
Result	2.7	2.2	500	18	1.9	9.9	28	11	970	44400	8600	18.1
Table 3	41	39	1500	300	17	na	420	100	2800	na	na	na
Table 1	75	85	4300	840	57	75	420	100	7500	na	na	na

Sampling date(s): 2/19/16, 2/22/16

2. Class B Pathogen Reduction: (Check off and fill in applicable portion)

- ☐ anaerobic digestion for \_\_\_\_\_ to \_\_\_\_\_ days at \_\_\_\_\_ to \_\_\_\_\_ degrees F / C (range for past month)  
Class B: time (days)  $\geq 120 - 3(\text{temp, degrees C})$  for times between 15 and 60 days
- ☐ aerobic digestion for \_\_\_\_\_ to \_\_\_\_\_ days at \_\_\_\_\_ to \_\_\_\_\_ degrees F / C (range for past month)  
Class B: time (days)  $\geq 120 - 4(\text{temp, degrees C})$  for times between 40 and 60 days
- ☐ drying beds for \_\_\_\_\_ to \_\_\_\_\_ months (attach records of dates in and out)  
Class B: time  $> 3$  months; 2 months  $> 0$  degrees C
- ☒ fecal coliform: geometric mean of seven samples = 23555 (attach lab results)  
Class B: geometric mean of seven samples is  $< 2,000,000$  mpn
- ☐ lime stabilization: pH at 2 hours after addition = \_\_\_\_\_  
Class B: pH 2 hours after addition of lime is  $\geq 12$

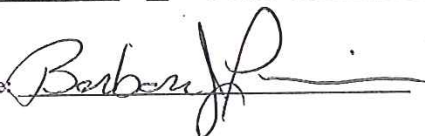
3. Vector Attraction Reduction:

- ☒ Option 1: % VS<sub>in</sub> = 78.3 % VS<sub>out</sub> = 61 % VSR = 56.6%  
VAR: VSR  $> 38\%$
- ☐ Option 2/3: Bench scale test: % VSR = \_\_\_\_\_ after \_\_\_\_\_ days  
VAR: additional VSR  $< 17\%$  after 40 days (anaerobic),  $< 15\%$  after 30 days (aerobic)
- ☐ Option 4: SOUR = \_\_\_\_\_  
VAR: SOUR  $< 1.5$  mg O<sub>2</sub>/hr/gram (dry weight)
- ☐ Option 5: Composted \_\_\_\_\_ days at temps of \_\_\_\_\_ to \_\_\_\_\_ degrees F/C (attach times/temps)  
VAR: temp  $> 40$  degrees C for 14 days, w/5 days  $> 45$  degrees C
- ☐ Option 6: time alkali added: \_\_\_\_\_ pH after 2 hours = \_\_\_\_\_ pH after 22 hours = \_\_\_\_\_  
VAR: pH  $\geq 12$  for 2 hours after alkali addition,  $\geq 11.5$  for additional 22 hrs
- ☐ Option 7: % solids = \_\_\_\_\_ Stabilization method: \_\_\_\_\_  
VAR: stabilized solids  $> 75\%$
- ☐ Option 8: % solids = \_\_\_\_\_  
VAR: unstabilized solids  $> 90\%$
- ☐ Option 9/10: Applier will inject/incorporate within \_\_\_\_\_ hours  
VAR: injection within 1 hour, incorporation within 6 hours

Certification: I certify, under penalty of law, that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system or the persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Name and Official Title: Barbara Pierson, Laboratory Manager

Phone: (831) 768-3179 E-mail: barbara.pierson@cityofwatsonville.org

Signature:  Date: 8/19/16



**Laboratories, Inc.**

Environmental Testing Laboratory Since 1949

City of Watsonville  
500 Clearwater Lane  
Watsonville, CA 95077

Reported: 03/04/2016 22:45  
Project: Bi-Monthly Biosolids  
Project Number: Bi-Monthly Nutrients & Metals  
Project Manager: Barbara Pierson

### Total Concentrations (TTLIC)

BCL Sample ID:	1605125-01	Client Sample Name: WWTP Biosolids, 2/19/2016 2:15:00PM, Mike Crane							
Constituent	Dry Basis Result	As Recvd Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Arsenic	2.7	0.48	mg/kg	1.0	0.40	EPA-6010B	ND	J	1
Cadmium	2.2	0.40	mg/kg	0.50	0.052	EPA-6010B	ND	J	1
Chromium	79	14	mg/kg	0.50	0.050	EPA-6010B	ND		1
Copper	500	91	mg/kg	1.0	0.050	EPA-6010B	0.12		1
Lead	18	3.2	mg/kg	2.5	0.28	EPA-6010B	ND		1
Mercury	1.9	0.35	mg/kg	0.16	0.041	EPA-7471A	ND		2
Molybdenum	9.9	1.8	mg/kg	2.5	0.050	EPA-6010B	ND	J	1
Nickel	28	5.0	mg/kg	0.50	0.15	EPA-6010B	ND		1
Selenium	11	2.0	mg/kg	1.0	0.98	EPA-6010B	ND		1
Silver	3.5	0.63	mg/kg	0.50	0.067	EPA-6010B	ND		1
Zinc	970	180	mg/kg	2.5	0.087	EPA-6010B	0.62		1
Boron	38	6.9	mg/kg	5.0	0.50	EPA-6010B	ND		1
Sodium	1300	240	mg/kg	25	3.6	EPA-6010B	6.7		1
Potassium	1300	240	mg/kg	50	5.0	EPA-6010B	ND		1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC
							Batch ID
1	EPA-6010B	03/01/16	03/01/16 17:49	JCC	PE-OP3	0.943	BZC0006
2	EPA-7471A	03/02/16	03/02/16 15:53	MEV	CETAC1	1.025	BZC0215





**Laboratories, Inc.**

Environmental Testing Laboratory Since 1949

City of Watsonville  
500 Clearwater Lane  
Watsonville, CA 95077

Reported: 03/04/2016 22:45  
Project: Bi-Monthly Biosolids  
Project Number: Bi-Monthly Nutrients & Metals  
Project Manager: Barbara Pierson

## Chemical Analysis

BCL Sample ID:	1605125-01	Client Sample Name: WWTP Biosolids, 2/19/2016 2:15:00PM, Mike Crane							
Constituent	Dry Basis Result	As Recvd Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
pH	7.90	7.90	pH Units	0.05	0.05	EPA-9040		pH1:3	1
pH Measurement Temperature	20.5	20.5	C	0.1	0.1	EPA-9040			1
Nitrate as N	3.2	0.58	mg/kg	1.0	0.26	EPA-300.0	ND	J	2
Total Kjeldahl Nitrogen	53000	9700	mg/kg	800	300	EPA-351.2	ND	A07	3
Ammonia as N	8600	1600	mg/kg	200	100	EPA-350.1	120	A07	4
Total Phosphorus	28000	5100	mg/kg	200	74	EPA-365.4	ND	A07	5
Solids	100	18.1	%	0.05	0.05	SM-2540G			6

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-9040	02/22/16	02/22/16 11:15	DIW	PH10	1	BZB2144
2	EPA-300.0	02/25/16	02/27/16 03:03	OLH	IC8	1	BZB2638
3	EPA-351.2	03/01/16	03/02/16 17:47	JMH	SC-1	19.231	BZC0145
4	EPA-350.1	02/24/16	02/25/16 12:06	JMH	SC-1	18.868	BZB2455
5	EPA-365.4	03/01/16	03/03/16 09:05	JMH	SC-1	19.231	BZC0146
6	SM-2540G	02/24/16	02/24/16 10:00	NW1	MANUAL	1	BZB2425

org N = TKN - ammonia

53,000 - 8,600 = 44,400

DENALI\_004765

**Notice and Necessary Information**  
To be Completed by Preparers of Class B Biosolids

Facility Name: City of Watsonville Wastewater Treatment Plant Monitoring Period 12 / 01 / 15 to 01 / 30 / 16

1. Pollutant and Nitrogen concentrations (report results on 100% dry weight basis. Attach lab analyses).

	As	Cd	Cu	Pb	Hg	Mo	Ni	Se	Zn	Org-N	NH <sub>4</sub> -N	% solids
Result	ND	1.9	440	17	1.2	12	27	9.0	850	43500	8500	15.4
Table 3	41	39	1500	300	17	na	420	100	2800	na	na	na
Table 1	75	85	4300	840	57	75	420	100	7500	na	na	na

Sampling date(s): 12/14/15

2. Class B Pathogen Reduction: (Check off and fill in applicable portion)

- ☐ anaerobic digestion for \_\_\_\_\_ to \_\_\_\_\_ days at \_\_\_\_\_ to \_\_\_\_\_ degrees F / C (range for past month)  
Class B: time (days)  $\geq 120 - 3(\text{temp, degrees C})$  for times between 15 and 60 days
- ☐ aerobic digestion for \_\_\_\_\_ to \_\_\_\_\_ days at \_\_\_\_\_ to \_\_\_\_\_ degrees F / C (range for past month)  
Class B: time (days)  $\geq 120 - 4(\text{temp, degrees C})$  for times between 40 and 60 days
- ☐ drying beds for \_\_\_\_\_ to \_\_\_\_\_ months (attach records of dates in and out)  
Class B: time > 3 months; 2 months > 0 degrees C
- ☒ fecal coliform: geometric mean of seven samples = 16980 (attach lab results)  
Class B: geometric mean of seven samples is < 2,000,000 mpn
- ☐ lime stabilization: pH at 2 hours after addition = \_\_\_\_\_  
Class B: pH 2 hours after addition of lime is  $\geq 12$

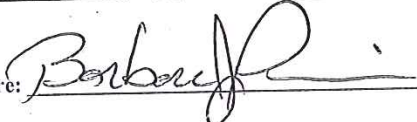
3. Vector Attraction Reduction:

- ☒ Option 1: % VS<sub>in</sub> = 82.3 % VS<sub>out</sub> = 59.2 % VSR = 68.8%  
VAR: VSR > 38%
- ☐ Option 2/3: Bench scale test: % VSR = \_\_\_\_\_ after \_\_\_\_\_ days  
VAR: additional VSR < 17% after 40 days(anaerobic), < 15% after 30 days (aerobic)
- ☐ Option 4: SOUR = \_\_\_\_\_  
VAR: SOUR < 1.5 mg O<sub>2</sub>/hr/gram (dry weight)
- ☐ Option 5: Composted \_\_\_\_\_ days at temps of \_\_\_\_\_ to \_\_\_\_\_ degrees F/C (attach times/temps)  
VAR: temp > 40 degrees C for 14 days, w/5 days > 45 degrees C
- ☐ Option 6: time alkali added: \_\_\_\_\_ pH after 2 hours = \_\_\_\_\_ pH after 22 hours = \_\_\_\_\_  
VAR: pH  $\geq 12$  for 2 hours after alkali addition,  $\geq 11.5$  for additional 22 hrs
- ☐ Option 7: % solids = \_\_\_\_\_ Stabilization method: \_\_\_\_\_  
VAR: stabilized solids > 75%
- ☐ Option 8: % solids = \_\_\_\_\_  
VAR: unstabilized solids > 90%
- ☐ Option 9/10: Applier will inject/incorporate within \_\_\_\_\_ hours  
VAR: injection within 1 hour, incorporation within 6 hours

Certification: I certify, under penalty of law, that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system or the persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Name and Official Title: Barbara Pierson, Laboratory Manager

Phone: (831) 768-3179 E-mail: barbara.pierson@cityofwatsonville.org

Signature: 

Date: 8/19/16

City of Watsonville  
500 Clearwater Lane  
Watsonville, CA 95077

Reported: 01/05/2016 12:20  
Project: Bi-Monthly Biosolids  
Project Number: Bi-monthly Nutrients & Metals  
Project Manager: Barbara Pierson

### Total Concentrations (TTLC)

BCL Sample ID:	1532459-01	Client Sample Name: WWTP Biosolids, 12/14/2015 1:50:00PM, Tram Nguyen							
Constituent	Dry Basis Result	As Recvd Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Arsenic	ND	ND	mg/kg	1.0	0.40	EPA-6010B	ND		1
Cadmium	1.9	0.29	mg/kg	0.50	0.052	EPA-6010B	ND	J	1
Chromium	77	12	mg/kg	0.50	0.050	EPA-6010B	ND		1
Copper	440	68	mg/kg	1.0	0.050	EPA-6010B	0.091		1
Lead	17	2.6	mg/kg	2.5	0.28	EPA-6010B	ND		1
Mercury	1.2	0.19	mg/kg	0.16	0.036	EPA-7471A	ND		2
Molybdenum	12	1.8	mg/kg	2.5	0.050	EPA-6010B	0.059	J	1
Nickel	27	4.1	mg/kg	0.50	0.15	EPA-6010B	ND		1
Selenium	9.0	1.4	mg/kg	1.0	0.98	EPA-6010B	ND		1
Silver	2.3	0.36	mg/kg	0.50	0.067	EPA-6010B	ND	J	1
Zinc	850	130	mg/kg	2.5	0.087	EPA-6010B	0.14		1
Boron	42	6.4	mg/kg	5.0	0.50	EPA-6010B	2.7		1
Sodium	1500	230	mg/kg	25	3.6	EPA-6010B	14		1
Potassium	1000	160	mg/kg	50	5.0	EPA-6010B	10		1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-6010B	12/21/15	12/21/15 16:57	JCC	PE-OP3	0.980	BYL1954
2	EPA-7471A	12/23/15	12/24/15 11:45	MEV	CETAC1	1.025	BYL2256



City of Watsonville  
500 Clearwater Lane  
Watsonville, CA 95077

Reported: 01/05/2016 12:20  
Project: Bi-Monthly Biosolids  
Project Number: Bi-monthly Nutrients & Metals  
Project Manager: Barbara Pierson

## Chemical Analysis

BCL Sample ID:	1532459-01	Client Sample Name: WWTP Biosolids, 12/14/2015 1:50:00PM, Tram Nguyen							
Constituent	Dry Basis Result	As Recvd Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
pH	7.89	7.89	pH Units	0.05	0.05	EPA-9040		pH1:1	1
pH Measurement Temperature	21.2	21.2	C	0.1	0.1	EPA-9040			1
Nitrate as N	6.9	1.1	mg/kg	1.0	0.26	EPA-300.0	ND		2
Total Kjeldahl Nitrogen	52000	8000	mg/kg	400	150	EPA-351.2	ND	A07	3
Ammonia as N	8500	1300	mg/kg	200	100	EPA-350.1	ND	A07	4
Total Phosphorus	31000	4700	mg/kg	200	76	EPA-365.4	ND	A07	5
Solids	100	15.4	%	0.05	0.05	SM-2540G			6

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC
							Batch ID
1	EPA-9040	01/04/16	01/04/16 12:45	DIW	MANUAL	1	BZA0072
2	EPA-300.0	12/28/15	12/29/15 02:04	OLH	IC8	1	BYL2477
3	EPA-351.2	12/28/15	12/30/15 11:26	JMH	SC-1	10	BYL2498
4	EPA-350.1	12/29/15	12/29/15 15:26	JMH	SC-1	18.519	BYL2584
5	EPA-365.4	12/28/15	01/04/16 12:09	JMH	SC-1	20	BYL2505
6	SM-2540G	12/22/15	12/22/15 10:15	NW1	MANUAL	1	BYL2122

$$\text{orgN} = \text{TKN} - \text{Ammonia}$$

$$52,000 - 8500 = 43,500$$

**Notice and Necessary Information**  
To be Completed by Preparers of Class B Biosolids

Facility Name: City of Watsonville Wastewater Treatment Plant Monitoring Period 10 / 01 / 15 to 11 / 30 / 15

1. Pollutant and Nitrogen concentrations (report results on 100% dry weight basis. Attach lab analyses).

	As	Cd	Cu	Pb	Hg	Mo	Ni	Se	Zn	Org-N	NH <sub>4</sub> -N	% solids
Result	ND	1.5	400	15	1.7	11	22	ND	730	49600	8400	15.7
Table 3	41	39	1500	300	17	na	420	100	2800	na	na	na
Table 1	75	85	4300	840	57	75	420	100	7500	na	na	na

Sampling date(s): 10/21/15, 10/26/15

2. Class B Pathogen Reduction: (Check off and fill in applicable portion)

- ☐ anaerobic digestion for \_\_\_\_\_ to \_\_\_\_\_ days at \_\_\_\_\_ to \_\_\_\_\_ degrees F / C (range for past month)  
Class B: time (days)  $\geq 120 - 3(\text{temp, degrees C})$  for times between 15 and 60 days
- ☐ aerobic digestion for \_\_\_\_\_ to \_\_\_\_\_ days at \_\_\_\_\_ to \_\_\_\_\_ degrees F / C (range for past month)  
Class B: time (days)  $\geq 120 - 4(\text{temp, degrees C})$  for times between 40 and 60 days
- ☐ drying beds for \_\_\_\_\_ to \_\_\_\_\_ months (attach records of dates in and out)  
Class B: time > 3 months; 2 months > 0 degrees C
- ☒ fecal coliform: geometric mean of seven samples = 300555 (attach lab results)  
Class B: geometric mean of seven samples is < 2,000,000 mpn
- ☐ lime stabilization: pH at 2 hours after addition = \_\_\_\_\_  
Class B: pH 2 hours after addition of lime is  $\geq 12$

3. Vector Attraction Reduction:

- ☒ Option 1: % VS<sub>in</sub> = 80.7 % VS<sub>out</sub> = 61 % VSR = 62.6%  
VAR: VSR > 38%
- ☐ Option 2/3: Bench scale test: % VSR = \_\_\_\_\_ after \_\_\_\_\_ days  
VAR: additional VSR < 17% after 40 days(anaerobic), < 15% after 30 days (aerobic)
- ☐ Option 4: SOUR = \_\_\_\_\_  
VAR: SOUR < 1.5 mg O<sub>2</sub>/hr/gram (dry weight)
- ☐ Option 5: Composted \_\_\_\_\_ days at temps of \_\_\_\_\_ to \_\_\_\_\_ degrees F/C (attach times/temps)  
VAR: temp > 40 degrees C for 14 days, w/5 days > 45 degrees C
- ☐ Option 6: time alkali added: \_\_\_\_\_ pH after 2 hours = \_\_\_\_\_ pH after 22 hours = \_\_\_\_\_  
VAR: pH  $\geq 12$  for 2 hours after alkali addition,  $\geq 11.5$  for additional 22 hrs
- ☐ Option 7: % solids = \_\_\_\_\_ Stabilization method: \_\_\_\_\_  
VAR: stabilized solids > 75%
- ☐ Option 8: % solids = \_\_\_\_\_  
VAR: unstabilized solids > 90%
- ☐ Option 9/10: Applier will inject/incorporate within \_\_\_\_\_ hours  
VAR: injection within 1 hour, incorporation within 6 hours

Certification: I certify, under penalty of law, that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system or the persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Name and Official Title: Barbara Pierson, Laboratory Manager

Phone: (831) 768-3179 E-mail: barbara.pierson@cityofwatsonville.org

Signature: \_\_\_\_\_

Date: 8/19/16

**Laboratories, Inc.**

Environmental Testing Laboratory Since 1949

City of Watsonville  
500 Clearwater Lane  
Watsonville, CA 95077Reported: 11/10/2015 14:45  
Project: Bi-Monthly Biosolids  
Project Number: Nutrients & Metals  
Project Manager: Barbara Pierson**Total Concentrations (TTLC)**

BCL Sample ID:	1527000-01	Client Sample Name: WWTP Biosolids, 10/21/2015 11:00:00AM, Jessie Mosqueda							
Constituent	Dry Basis Result	As Recvd Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Arsenic	ND	ND	mg/kg	1.0	0.40	EPA-6010B	ND		1
Cadmium	1.5	0.23	mg/kg	0.50	0.052	EPA-6010B	ND	J	1
Chromium	61	9.6	mg/kg	0.50	0.050	EPA-6010B	ND		1
Copper	400	62	mg/kg	1.0	0.050	EPA-6010B	ND		1
Lead	15	2.3	mg/kg	2.5	0.28	EPA-6010B	ND	J	1
Mercury	1.7	0.27	mg/kg	0.16	0.036	EPA-7471A	ND		2
Molybdenum	11	1.7	mg/kg	2.5	0.050	EPA-6010B	ND	J	1
Nickel	22	3.4	mg/kg	0.50	0.15	EPA-6010B	ND		1
Selenium	ND	ND	mg/kg	1.0	0.98	EPA-6010B	ND		1
Silver	1.6	0.25	mg/kg	0.50	0.067	EPA-6010B	ND	J	1
Zinc	730	120	mg/kg	2.5	0.087	EPA-6010B	0.37		1
Boron	35	5.5	mg/kg	5.0	0.50	EPA-6010B	1.3		1
Sodium	1400	230	mg/kg	25	3.6	EPA-6010B	ND		1
Potassium	1200	180	mg/kg	50	5.0	EPA-6010B	ND		3

Run #	Method	Prep Date	Run		Analyst	Instrument	Dilution	QC
			Date/Time					Batch ID
1	EPA-6010B	10/26/15	10/28/15 14:21		ARD	PE-OP3	0.917	BYJ2267
2	EPA-7471A	10/27/15	10/28/15 15:04		MEV	CETAC1	1.008	BYJ2393
3	EPA-6010B	10/26/15	10/29/15 10:18		ARD	PE-OP3	0.917	BYJ2267

**DENALI\_004770**



City of Watsonville  
500 Clearwater Lane  
Watsonville, CA 95077

Reported: 11/10/2015 14:45  
Project: Bi-Monthly Biosolids  
Project Number: Nutrients & Metals  
Project Manager: Barbara Pierson

## Chemical Analysis

BCL Sample ID:	1527000-01	Client Sample Name: WWTP Biosolids, 10/21/2015 11:00:00AM, Jessie Mosqueda							
Constituent	Dry Basis Result	As Recvd Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
pH	6.87	6.87	pH Units	0.05	0.05	EPA-9040		pH1:3	1
pH Measurement Temperature	22.5	22.5	C	0.1	0.1	EPA-9040			1
Nitrate as N	3.6	0.56	mg/kg	1.0	0.26	EPA-300.0	ND.	J	2
Total Kjeldahl Nitrogen	58000	9100	mg/kg	400	150	EPA-351.2	ND	A07	3
Ammonia as N	8400	1300	mg/kg	200	100	EPA-350.1	ND	A07	4
Total Phosphorus	34000	5300	mg/kg	200	76	EPA-365.4	ND	A07	5
Solids	100	15.7	%	0.05	0.05	SM-2540G			6

Run #	Method	Prep Date	Run		Analyst	Instrument	Dilution	QC
			Date/Time					Batch ID
1	EPA-9040	10/28/15	10/28/15 13:15		DIW	MANUAL	1	BYJ2647
2	EPA-300.0	10/29/15	10/30/15 15:26		OLH	IC5	1	BYJ2673
3	EPA-351.2	10/28/15	10/30/15 13:20		JMH	SC-1	10	BYJ2622
4	EPA-350.1	10/30/15	11/04/15 16:13		JMH	SC-1	19.231	BYJ2861
5	EPA-365.4	10/28/15	10/30/15 11:05		JMH	SC-1	20	BYJ2623
6	SM-2540G	10/26/15	10/26/15 09:15		NW1	MANUAL	1	BYJ2278

Org-N = TKN - Ammonia

58000 - 8400 = 49600

**Notice and Necessary Information**  
To be Completed by Preparers of Class B Biosolids

Facility Name: City of Watsonville Wastewater Treatment Plant Monitoring Period 8 / 01 / 15 to 9 / 30 / 15

1. Pollutant and Nitrogen concentrations (report results on 100% dry weight basis. Attach lab analyses).

	As	Cd	Cu	Pb	Hg	Mo	Ni	Se	Zn	Org-N	NH <sub>4</sub> -N	% solids
Result	ND	2.0	390	11	1.1	10	21	ND	750	45,000	10000	16.2
Table 3	41	39	1500	300	17	na	420	100	2800	na	na	na
Table 1	75	85	4300	840	57	75	420	100	7500	na	na	na

Sampling date(s): 8/19/15, 8/24/15

2. Class B Pathogen Reduction: (Check off and fill in applicable portion)

- ☐ anaerobic digestion for \_\_\_\_\_ to \_\_\_\_\_ days at \_\_\_\_\_ to \_\_\_\_\_ degrees F / C (range for past month)  
Class B: time (days)  $\geq 120 - 3(\text{temp, degrees C})$  for times between 15 and 60 days
- ☐ aerobic digestion for \_\_\_\_\_ to \_\_\_\_\_ days at \_\_\_\_\_ to \_\_\_\_\_ degrees F / C (range for past month)  
Class B: time (days)  $\geq 120 - 4(\text{temp, degrees C})$  for times between 40 and 60 days
- ☐ drying beds for \_\_\_\_\_ to \_\_\_\_\_ months (attach records of dates in and out)  
Class B: time > 3 months; 2 months > 0 degrees C
- ☒ fecal coliform: geometric mean of seven samples = 7998 (attach lab results)  
Class B: geometric mean of seven samples is < 2,000,000 mpn
- ☐ lime stabilization: pH at 2 hours after addition = \_\_\_\_\_  
Class B: pH 2 hours after addition of lime is  $\geq 12$

3. Vector Attraction Reduction:

- ☒ Option 1: % VS<sub>in</sub> = 77 % VS<sub>out</sub> = 62 % VSR = 51.03%  
VAR: VSR > 38%
- ☐ Option 2/3: Bench scale test: % VSR = \_\_\_\_\_ after \_\_\_\_\_ days  
VAR: additional VSR < 17% after 40 days (anaerobic), < 15% after 30 days (aerobic)
- ☐ Option 4: SOUR = \_\_\_\_\_  
VAR: SOUR < 1.5 mg O<sub>2</sub>/hr/gram (dry weight)
- ☐ Option 5: Composted \_\_\_\_\_ days at temps of \_\_\_\_\_ to \_\_\_\_\_ degrees F/C (attach times/temps)  
VAR: temp > 40 degrees C for 14 days, w/5 days > 45 degrees C
- ☐ Option 6: time alkali added: \_\_\_\_\_ pH after 2 hours = \_\_\_\_\_ pH after 22 hours = \_\_\_\_\_  
VAR: pH  $\geq 12$  for 2 hours after alkali addition,  $\geq 11.5$  for additional 22 hrs
- ☐ Option 7: % solids = \_\_\_\_\_ Stabilization method: \_\_\_\_\_  
VAR: stabilized solids > 75%
- ☐ Option 8: % solids = \_\_\_\_\_  
VAR: unstabilized solids > 90%
- ☐ Option 9/10: Applier will inject/incorporate within \_\_\_\_\_ hours  
VAR: injection within 1 hour, incorporation within 6 hours

Certification: I certify, under penalty of law, that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system or the persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Name and Official Title: Barbara Pierson, Laboratory Manager

Phone: (831) 768-3179 E-mail: bpierson@ci.watsonville.ca.us

Signature: \_\_\_\_\_

Date: 8/19/15

**Laboratories, Inc.**

Environmental Testing Laboratory Since 1949

City of Watsonville  
500 Clearwater Lane  
Watsonville, CA 95077Reported: 09/08/2015 16:12  
Project: Bi-Monthly Biosolids  
Project Number: Nutrients & Metals  
Project Manager: Barbara Pierson**Total Concentrations (TTLC)**

BCL Sample ID:	1521134-01	Client Sample Name: WWTP Biosolids, 8/19/2015 12:22:00PM, Joey Cervantes							
Constituent	Dry Basis Result	As Recvd Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Arsenic	ND	ND	mg/kg	1.0	0.40	EPA-6010B	ND		1
Cadmium	2.0	0.33	mg/kg	0.50	0.052	EPA-6010B	ND	J	1
Chromium	61	9.9	mg/kg	0.50	0.050	EPA-6010B	0.13		1
Copper	390	63	mg/kg	1.0	0.050	EPA-6010B	ND		1
Lead	11	1.7	mg/kg	2.5	0.28	EPA-6010B	ND	J	1
Mercury	1.1	0.18	mg/kg	0.16	0.036	EPA-7471A	ND		2
Molybdenum	10	1.6	mg/kg	2.5	0.050	EPA-6010B	0.16	J	1
Nickel	21	3.4	mg/kg	0.50	0.15	EPA-6010B	ND		1
Selenium	ND	ND	mg/kg	1.0	0.98	EPA-6010B	ND		1
Silver	1.5	0.25	mg/kg	0.50	0.067	EPA-6010B	ND	J	1
Zinc	750	120	mg/kg	2.5	0.087	EPA-6010B	0.66		1
Boron	17	2.8	mg/kg	5.0	0.50	EPA-6010B	ND	J	1
Sodium	1500	240	mg/kg	25	3.6	EPA-6010B	ND		1
Potassium	970	160	mg/kg	50	5.0	EPA-6010B	ND		1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-6010B	08/28/15	08/28/15 16:43	JRG	PE-OP2	0.980	BYH2750
2	EPA-7471A	08/28/15	08/28/15 13:39	MEV	CETAC1	1.008	BYH2719

**DENALI\_004773**





**Laboratories, Inc.**

Environmental Testing Laboratory Since 1949

City of Watsonville  
500 Clearwater Lane  
Watsonville, CA 95077

Reported: 09/08/2015 16:12  
Project: Bi-Monthly Biosolids  
Project Number: Nutrients & Metals  
Project Manager: Barbara Pierson

## Chemical Analysis

BCL Sample ID:	1521134-01	Client Sample Name:	WWTP Biosolids, 8/19/2015 12:22:00PM, Joey Cervantes						
Constituent	Dry Basis Result	As Recvd Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
pH	7.37	7.37	pH Units	0.05	0.05	EPA-9040		pH1:1	1
pH Measurement Temperature	24.0	24.0	C	0.1	0.1	EPA-9040			1
Nitrate as N	ND	ND	mg/kg	1.0	0.26	EPA-300.0	ND		2
Total Kjeldahl Nitrogen	55000	8900	mg/kg	400	160	EPA-351.2	ND	A07	3
Ammonia as N	10000	1700	mg/kg	200	100	EPA-350.1	ND	A07	4
Total Phosphorus	36000	5900	mg/kg	200	76	EPA-365.4	ND	A07	5
Solids	100	16.2	%	0.05	0.05	SM-2540G			6

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-9040	09/02/15	09/02/15 13:45	DIW	MANUAL	1	BYI0334
2	EPA-300.0	08/25/15	08/26/15 07:52	OLH	IC1	1	BYH2379
3	EPA-351.2	09/02/15	09/08/15 10:36	JMH	SC-1	10	BYI0195
4	EPA-350.1	08/27/15	08/31/15 09:51	JMH	SC-1	20	BYH0710
5	EPA-365.4	09/02/15	09/08/15 09:10	JMH	SC-1	20	BYI0197
6	SM-2540G	08/26/15	08/26/15 11:00	DIW	MANUAL	1	BYH2574

org-N = TKN - Ammonia

$8900 - 1700 = 7200$   
 $55000 - 10000 = 45,000$

DENALI\_004774

## City of Watsonville Utilities Laboratory

### Pathogen Reduction Supporting Data Fecal Coliform Monitoring

Date Analyzed Date Sampled	Sample	MPN/gram (dry weight)					
		8/24/2015	10/26/2015	12/14/2015	2/22/2016	4/25/2016	6/27/2016
	1	2,558	182,300	28	47	35.5	51
	2	298,100	49,480	92,390	2,037	11,450	365
	3	138	183,300	98,270	385,756	722	4,609
	4	42	1,514,000	80,750	9,884	1,278	116,280
	5	486,700	17,370	2,102	178,378	23,570	2,784,000
	6	74,710	4,031,000	40150	139,534	71,430	1097
	7	13,070	126,400	234,900	443,820	42,700	1,635,500
<b>Geometric Mean*</b>		<b>7,998</b>	<b>300,555</b>	<b>16,980</b>	<b>23,555</b>	<b>4,295</b>	<b>12,572</b>

\* To meet Class B Standards, samples must have <2,000,000 MPN/gram fecal coliform. All samples are well below this criteria.

Samples collected from 7 discrete locations on the drying bed at the Wastewater Treatment Facility  
Sample analyzed on the same day they were collected by Utilities Department Laboratory Analyst